

What is Claimed is:

1. A transparent composite comprising:
 - (a) a first layer comprising a transparent substrate polymer material; and
 - (b) a second layer comprising a transparent fluorocarbon polymer film;

wherein the second layer is bonded to the first layer.

2. The transparent composite of claim 1 further comprising a transparent adhesive layer disposed between the first layer and the second layer.

3. The transparent composite of claim 1 wherein the first layer is a polycarbonate.

4. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent fluorocarbon polymer.

5. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-CF_2 - CF_2 - CH_2 - CH_2 -]_n$.

6. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-CF_2 - CF_2 - CH_2 - CH_2 - CH_2]_n$.

7. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-CF_2 - CF_2 - CH_2 - \dot{C}H_2]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.

8. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CH}_2 - \text{CH}_2]_n$, where n is of a value such that transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.

9. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CF}_2 - \text{CF}(\text{CF}_3) -]_n$.

10. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CF}_2 - \text{CF}(\text{CF}_3) -]_n$.

11. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CF}(\text{OC}_3\text{F}_7) - \text{CF}_2 -]_n$.

12. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CF}(\text{OC}_3\text{F}_7) - \text{CF}_2 -]_n$.

13. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-\text{CFCl} - \text{CF}_2 -]_n$.

14. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CFCl} - \text{CF}_2 -]_n$.

15. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[-\text{CF}_2 - \text{CFCl} - \text{CF}_2 - \text{CFCl} -]_n$.

16. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CFCl} - \text{CF}_2 - \text{CFCl} -]_n$.

17. The transparent composite of claim 1 wherein the first layer is flexible.
18. A chemical laboratory reaction enclosure having a transparent window, the transparent window being a transparent composite comprising:
- (a) a first layer comprising a substrate polymer material; and
 - (b) a second layer comprising a transparent fluorocarbon polymer; wherein the second layer is bonded to the first layer.
19. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent fluorocarbon polymer.
20. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer comprises a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CH}_2 - \text{CH}_2 -]_n$.
21. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CH}_2 - \text{CH}_2 -]_n$.
22. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer comprises a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CH}_2 - \text{CH}_2 -]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.
23. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent material having the formula $[-\text{CF}_2 - \text{CF}_2 - \text{CH}_2 - \text{CH}_2 -]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.